AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A microchip comprising:

a specimen flow pass that is a fine pass allowing a specimen to be transported toward one end thereof;

a reagent flow pass that is a fine pass connected with the one end of the specimen flow pass, said reagent flow pass allowing at least one reagent to be transported for reaction with the specimen;

a confluence flow pass that extends from the one end of the specimen flow pass, the confluence flow pass allowing the confluent specimen and reagent to be transported therethrough;

a sensing portion provided at a position adjacent to a part of the confluence flow pass, wherein a reaction of the specimen and the reagent is capable of being detected or observed thereat;

a micro pump which is capable of bi-directional suction and discharge of the specimen and the reagent and is provided at the specimen flow pass and the reagent flow pass or at the confluence flow pass; and

a driver which applies a driving pulse to the micro pump to drive the micro pump for reciprocating motion.

2.-3. (Canceled).

4. (Original) A microchip claimed in claim 1, wherein the sensing portion has light guiding properties and extends continuously and is adjacent to the exterior of the microchip and the confluence flow pass and mixing flow pass.

5. (Original) A microchip as claimed in claim 1, wherein the sensing portion comprises a window through which a sensor provided exterior of the microchip observes a reaction of the specimen and reagent.

6. (Original) A microchip as claimed in claim 1, wherein microparticles are contained in the confluent specimen and reagent.

7. (Original) A microchip as claimed in claim 1, wherein the reagent flow pass comprises a plurality of branches so as to allow the flow of a plurality of reagents.

8. (Original) A microchip as claimed in claim 7, wherein the branches join at a location other than the one end of the specimen flow pass.

9. (Previously Presented) A microchip comprising:

a mixing flow pass that is a fine flow pass allowing a specimen to be transported therethrough, the mixing flow pass has a reagent loading unit for holding reagent to be added to and reacted with the specimen;

a sensing portion, provided at a location adjacent to the mixing flow pass, at which a reaction of the specimen and the reagent is capable of being detected or observed;

a micro pump which is capable of bi-directional suction and discharge of the specimen and the reagent and is provided at the mixing flow pass; and

a driver which applies a driving pulse to the micro pump for reciprocating motion.

10.-11. (Canceled).

12. (Currently Amended) A microchip as claimed in claim 9, wherein the sensing portion has light guiding properties and extends continuously and is adjacent to the exterior of the microchip and the mixing flow pass.

13. (Original) A microchip as claimed in claim 12, wherein the sensing portion comprises a window through which a sensor provided exterior of the microchip observes a reaction of the specimen and reagent.

14. (Previously Presented) A microchip as claimed in claim 9, wherein microparticles are contained in a mixture of specimen and reagent.

15. (Original) A microchip as claimed in claim 9, wherein the reagent loading unit preliminarily fix the reagent until the reagent is added to the specimen.

16. (Canceled).

17. (Original) A reaction detection method comprising the steps of:

a first step of adding reagent to a specimen within a fine flow pass of a microchip;

a second step of causing a reciprocal movement along the flow pass to the specimen to which the reagent has been added; and

a third step of detecting a change in the reciprocal movement due to a reaction of the specimen and the reagent within the flow pass.

18. (Original) A reaction detection method as claimed in claim 17, wherein microparticles are added to the specimen in the first step, and wherein a reciprocal movement of the microparticles are detected in the third step.

19. (Original) A reaction detection method as claimed in claim 18, further comprising a fourth step of measuring a time period until the reciprocal movement of the microparticles stops.

20. (Original) A reaction detection method as claimed in claim 17, wherein pressures of a predetermined magnitude are applied to the specimen to which the reagent has been added.

21. (Previously Presented) A microchip comprising:

a fine flow pass through which a specimen and a reagent are capable of being transported;

a sensing portion provided adjacent to a part of the fine flow pass;

a micro pump which is capable of bi-directional suction and discharge of the specimen and the reagent and is provided at the fine flow pass; and

a driver which applies a driving pulse to the micro pump for reciprocating motion.

22.-23. (Canceled).

24. (Previously Presented) A microchip as claimed in claim 21, wherein the sensing portion has light guiding properties and extends continuously and is adjacent to the exterior of the microchip and the fine flow pass.

25. (Original) A microchip as claimed in claim 24, wherein the sensing portion comprises a window through which a sensor provided exterior of the microchip observes a reaction of the specimen and reagent.

26. (Previously Presented) A reaction detection device comprising:

a specimen flow pass that is a fine pass allowing a specimen to be transported toward one end thereof;

a reagent flow pass that is a fine pass connected with the one end of the specimen flow pass, said reagent flow pass allowing at least one reagent to be transported for reaction with the specimen;

a confluence flow pass that extends from the one end of the specimen flow pass, the confluence flow pass allowing the confluent specimen and reagent to be transported therethrough;

a sensing region provided at a position adjacent to a part of the confluence flow pass, wherein a reaction of the specimen and the reagent is capable of being detected or observed thereat;

a micro pump for reciprocally moving the specimen and the reagent at the sensing

region;

a drive unit for providing a driving waveform to the micro pump, the waveform having a rise time t1 greater than or equal to a fall time t2 to move the specimen and the reagent in a first direction and have a rise time t1 less than a fall time t2 to move the specimen and the reagent in a second direction opposite the first direction.

27. (Previously Presented) A reaction detection device comprising:

a mixing flow pass that is a fine flow pass allowing a specimen to be transported therethrough, the mixing flow pass has a reagent loading unit for holding reagent to be added to and reacted with the specimen;

a sensing portion, provided at a location adjacent to the mixing flow pass, at which a reaction of the specimen and the reagent is capable of being detected or observed;

a micro pump for reciprocally moving the specimen and the reagent at the sensing portion, and

a drive unit for providing a driving waveform to the micro pump, the waveform having a rise time t1 greater than or equal to a fall time t2 to move the specimen and the reagent in a first direction and have a rise time t1 less than a fall time t2 to move the specimen and the reagent in a second direction opposite the first direction.

28. (Previously Presented) A microchip as claimed in claim 1,

wherein the driver drives the micro pump in order to move the specimen and the reagent to the confluence flow pass within a certain period of time and, subsequently, reciprocate the confluent specimen and reagent.

29. (Previously Presented) A microchip as claimed in claim 9,

wherein the driver drives the micro pump in order to move the specimen and the reagent to the mixing flow pass within a certain period of time and, subsequently, reciprocate the confluent specimen and reagent.

30. (Previously Presented) A reaction detection method as claimed in claim 17,

wherein the second step includes applying an asymmetric driving waveform to a micro pump of the microchip.

31. (Previously Presented) A microchip as claimed in claim 21,

wherein the driver drives the micro pump in order to move the specimen and the reagent so as to mix the specimen and the reagent within a certain period of time and, subsequently, reciprocate the confluent specimen and reagent.